DOCUMENT RESUME

ED 408 895 HE 030 211

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TITLE	Twenty Years of Higher Education in Virginia.
INSTITUTION	Virginia State Council of Higher Education, Richmond.
PUB DATE	97
NOTE	43p.
PUB TYPE	Opinion Papers (120)
EDRS PRICE	MF01/PC02 Plus Postage.
DESCRIPTORS	*Community Support; Educational Economics; *Educational Finance; Educational Policy; *Financial Support; Government School Relationship; *Higher Education; Innovation; Institutional Survival; Planning; Political Influences; Political Power; *Politics of Education; Public Opinion; Public Support; Resource Allocation; *School Support; State Aid; State Boards of Education; State Government; Technology Transfer; Telecommunications
IDENTIFIERS	*Virginia

ABSTRACT

This report on Virginia higher education briefly reviews the impact of economic recession, slashed budgets, increased tuition, and increasing politicization upon the state's higher education system, and then looks ahead to issues critical to the higher education's future in the state. The report proposes action in three areas: (1) adequate funding of higher education, noting that the state's standing in funding per student dropped from 27th place in 1985 to 44th in 1995; (2) a need to protect the higher education system from partisan politics and interference observed at all levels--administrative, public support, and intellectual; and (3) seizing the opportunities offered by advanced communications technology. The report envisions a higher education system with new rules--with no protectionist cartels, with strategic investment targeted toward specific opportunities rather than spread about by formula, with an understanding of the practical limits of planning, and the emergence of alternative organizations to advocate on behalf of higher education. (CH)

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EDUCATION IS NOT A TRIVIAL BUSINESS

A PRIVATE GOOD

OR A DISCRETIONARY EXPENDITURE

IT IS A DEEPLY ETHICAL UNDERTAKING

AT WHICH WE MUST SUCCEED

IF WE ARE TO SURVIVE AS A FREE PEOPLE

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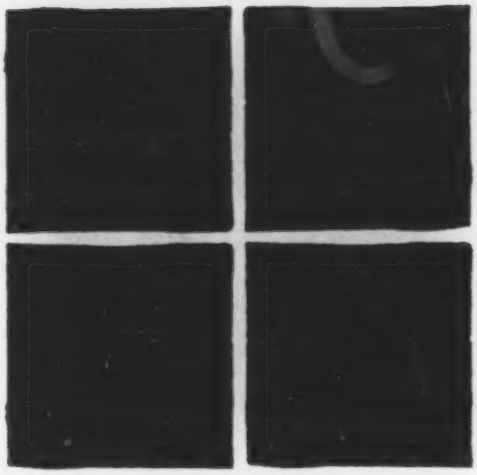

PLATE 1

TWENTY YEARS OF HIGHER EDUCATION IN VIRGINIA

BY GORDON K. DAVIES

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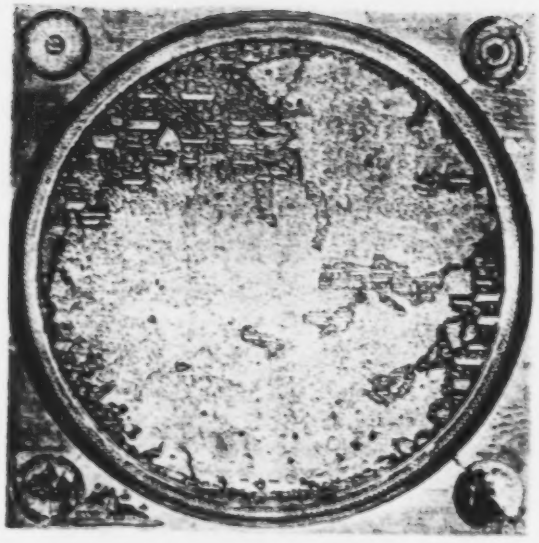

PLATE 2

APRIL 1997

To my friends and colleagues:

I have been asked to write a report reflecting upon my 20 years as Director of the State Council of Higher Education for Virginia and upon issues that I think are critically important to the future of higher education. I have done so.

My thoughts are, of course, shaped by my work in Virginia higher education and also by my earliest experiences with educational opportunity and intellectual excellence. My admission to Yale College just over 40 years ago was a kind of affirmative action for the time and institution: a graduate of a working class high school rather than a New England prep school, needing full scholarship support, the first in my family to attend college. I have never forgotten the opportunity and, perhaps, because of it have spent most of my professional life working to provide high quality advanced education for as many people as possible.

Through ignorance and naiveté, I missed much of what one of America's most prestigious universities offered. But I believed what the faculty told me: that Yale was an intellectual adventure. And I acted accordingly. I thought it mattered greatly that Socrates paid his debts before he died; that a lens-maker named Spinoza accepted expulsion from his community of faith in order to do philosophy; that Pound's betrayal of his craft was as significant as his betrayal of his country; and that Dickinson tasted a liquor never brewed. I tried to understand what these men and women, and others, were about. Ideas matter. I took them seriously, and I still do.

Colleges and universities are places where learners, faculty and students alike, work to understand what has been said and done, and create new knowledge. I remember rare moments in seminar rooms or library carrels when an idea suddenly came alive. The reward was a prize beyond all expectation. They are intense moments when a special kind of learning occurs, "peak experiences" of a special sort. Anyone who has experienced such little epiphanies is fortunate.

I do not think I was wrong to regard college as an intellectual adventure, although many did not then and do not today. Colleges and universities provide many essential services to the people of Virginia and the nation. They help women and men prepare themselves for work and economic self-sufficiency. They solve technical problems and create knowledge that improves the human condition: better food, cleaner air and water, life-saving medicines and procedures – the list goes on and on.

But in the end, the highest purpose of all education is to help people learn how to live in the world – how to live what Aristotle called a "good life." This purpose complements and fulfills the practical aims of education. The well-educated person not only has acquired skills and knowledge, but knows why she has acquired them and what to do with them for the common good.

After all the job-related courses, the training in computer and other technologies; after all the cooperative relationships with industry and all the synergies between higher education and economic development; after all the exploitation of modern communications networks as new ways to deliver instruction...

After all this, if women and men have not learned to choose "good lives" as a result of the hours or years they spend with us, they will march someday at the behest of demagogues. I am aware, as is anyone who remembers World War II, that learning in the liberal arts is no guarantee against tyranny. But minds ignorant of the best that has been thought and said in human history seem to me to be particularly fertile ground for intolerance and brutality. Liberal education may not guarantee decent human behavior, but decent behavior is far less likely in its absence.

Education is not a trivial business, a private good, or a discretionary expenditure. It is a deeply ethical undertaking at which we must succeed if we are to survive as a free people. The founders of this Commonwealth, who were eminent among the founders of this nation, seem to have known this more certainly than we do today. As the millennium approaches, and we engage in introspection, as we inevitably shall, we might ask whether Virginians have the conviction and commitment to make education the single highest priority of government.

I am indebted to everyone with whom I have worked over the years, and to those who first gave me the opportunity to encounter intellectual excellence. I should liked to have written a better report, but offer this one for what it may be worth.

Gordon K. Davies

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PLATE 3

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INTRODUCTION: A SECOND CHANCE

This is the second ten-year report on Virginia higher education I have prepared during my service as Director of the State Council of Higher Education for Virginia, and it surely is the last. Ten years in this job is an honor; 20 is an oddity; but 30 would be cruel and unusual punishment. I present this report under very different circumstances than the one I prepared in 1987, when Virginia higher education was in renaissance. In 1997, opportunities remain abundant, but we are struggling to regain a place of grace.

I have been privileged to work with very good people at the Council and in a system of very good colleges and universities. And I remain convinced that state-level coordination of higher education is useful and necessary, even though almost no one really wants it done.

"Every morning, when you look into the mirror," a university president told one of my colleagues in another state, "you should ask yourself: I am an evil: but am I necessary?" I think that coordination of complex systems is necessary in this time of extraordinarily rapid change. But both systems and their effective coordination are changing along with everything else.

The root causes of the change are neither trivial nor casual. We are living at the end of a major intellectual movement known as the Enlightenment. This movement, the hallmark of which is rationalism, began in reaction to the appalling religious wars of the 16th and early 17th centuries. Thinkers like Rene Descartes recognized the need for logical, orderly thought, strictly separated from the passions and enthusiasms that fed the flames of religious intolerance and bigotry.

But in the 20th century the inherent limitations of reason have become increasingly apparent. Despite scientific and technical progress, our century has had its own "Thirty Years' War," from 1914 to 1945. In logical, orderly ways, we have unleashed horrid forces of destruction and slaughtered millions of human beings. "Snow is falling on the Age of Reason," writes a poet, and "on Mr. Jefferson's little hill."

The Enlightenment's quest for certainty, for unchanging truths that would protect us from the savagery of our own passions, is ending short of the mark. The history of the 20th century is, at one and the same time, a history of astonishing technological progress and of enormous human dislocation and suffering. We end the century more aware of one another in the "global village," but also more aware of the vast gap between the big house on the hill and the hovel in the hollow.

WE ARE STRUGGLING TO REGAIN A PLACE OF GRACE

The work of higher education planning and coordination is fascinating in this time between traditions because, like learning in the modern university, it is always provisional. Our work, as a colleague in another state described it, requires "rapid improvisation in the face of unanticipated change." What we do today is not satisfactory for tomorrow; the notion of a five-year plan is quaint; there is no end to change and possible improvement but the goal is to become "more perfect" rather than "perfect." The time is transitional, and it is therefore important that we avoid rigidity and that we suspect all forms of certainty about where we're going and what we should do. We can only be certain that we are working toward

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something we do not see clearly. It is an exciting, if occasionally frightening, time.

We also can be certain that higher education planning and coordination is now a business of ideas, rather than of statutes and regulations. We, and our colleagues in the colleges and universities, are creating something new. Not necessarily because all of us want to, but because we have to. "Whatever we do together is pure invention," writes another poet. "The maps they gave us were out of date by years."

In my 1987 report, I identified many of the issues with which we would have to deal in the coming decade. But I did not foresee the economic recession that caused us to spend the first half of the 1990s slashing budgets and increasing tuitions until the very notion of what it means to be a Virginia "state supported" college or university is in question.

I foresaw the need for restructuring, the kind of change that does not come easily and that comes only at a price. But I missed the intensified politicization of education that has infected our nation in this decade and now threatens Virginia higher education.

For all the difficulties, Virginia still is committed to the first principles of public higher education: every citizen who can benefit deserves access to it; and those responsible for the system of colleges and universities should make that education as good as we possibly can. But this commitment now is attenuated by absence of political leadership, rising levels of intolerance in our society, and meanness of spirit.

I believe that higher education can continue to improve the human condition, both by helping students learn how to lead healthy and productive lives, and through research that creates new knowledge or leads to new technologies. Moreover, our colleges and universities have a major responsibility to help people who are or will be the leaders of our society learn to live productively with uncertainty. One of the orienting values that colleges and universities need to retain in a rapidly changing world is the importance of preparing women and men to be thoughtful, skilled, compassionate, and skeptical participants in public and private life. This may require a new conception of liberal education, or at least a new understanding of how technical skills and knowledge are related to the liberal arts.

Preparing men and women for the opportunities that will open to them will not be easy or, to put it better, will be even more difficult than it ever has been. Traditional higher education faces a serious challenge in the next several years from new kinds of educational providers who have very little stake in liberal education and whose purposes are frankly utilitarian.

Partly by policy and partly by accident, the United States has made colleges and universities the gateway to just about everything we judge to be good in our society: productive work, self-reliance, better health, labor-saving technology, recreation, aesthetic experiences – the list goes on. Perhaps out of conviction that there simply is no such thing as being "over-educated," our predecessors built a system of universal access to advanced learning. The greatest American innovations in higher education, the land grant university and the community college, were intended to broaden access to applied, advanced education. No other people, at any time or in any place, has provided so broad an educational franchise. Indeed, the rest of the technologically advanced world is moving rapidly to provide as much

access to higher education as we do. We can't turn back. And we shouldn't want to.

A distinguished teacher and scholar once began a seminar by asking what conditions of the present time made it unlikely that a similar gathering could occur 100 years from now. Borrowing but inverting his rhetorical device, I begin my 20-year report with this question:

> What should we do today to help ensure that Virginia's (and America's) colleges and universities will continue to improve the services they provide the people and institutions of our society?

I propose that we need to act in three areas. We need to fund higher education adequately, protect our systems of higher education from the vagaries of partisan politics and ideologies, and seize the dangerous opportunities offered by advanced communications technology.

WE **CAN'T** TURN BACK AND WE SHOULDN'T WANT TO

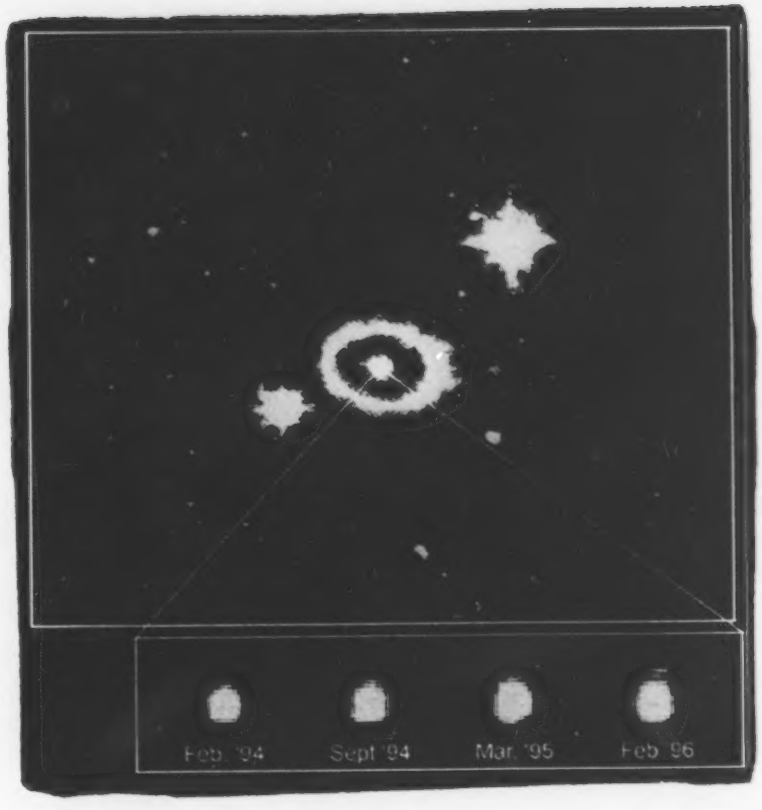

PLATE 1

Fund Higher Education Adequately

The fact that revenue is scarce is hardly a new problem for government; there never has been enough money to do all the good things that could be done. And the scarcity of revenue here pales in comparison to that experienced by other governments throughout the world. But the current situation seems to be serious for higher education for several reasons. First, there appears finally to be a commitment to balance the federal budget or at least to reduce the federal deficit substantially. Second, several of the major targets for federal budget-cutting are social programs that Washington will pass to the states in whole or in part. These include welfare and health-care programs, of course, but they also may include responsibility for student financial aid, medical education, and a host of other activities. Third and finally, the American people show a strong disinclination to continue supporting governments at their current levels. In this phase of our public life, "big government" is in the doghouse. Political opportunists seek their own advancement by bashing government whenever they can, including public colleges and universities.

So, in Virginia we find ourselves with modest revenues from modest taxes, and with government expenditures that are increasing faster than the revenues. Among the "mandatory" expenditures are elementary and secondary education, Medicaid, and prisons and jails. Among the "desirable" expenditures, alas, are higher education and a number of other activities that help to define a civilized society. Higher education's share of the state's general fund revenues is lower today than it was in 1977, a trend which even an occasional good year does not alter.

In fact, Virginia's needs exceed its revenues. Were it not for windfalls of various sorts, the state would not have enough money to provide the services Virginians apparently want. Non-tax revenue has been used for almost a decade to pay for new or expanded services, beginning in 1988 with the use of lottery profits to support capital outlay. Then, during the recession, the lottery profits were used to support state government operations, and the only source of revenue for capital outlay became bonded indebtedness. Now we have about reached the self-imposed limit of our debt capacity. This well, too, is dry for the foreseeable future.

In preparing the budget for 1996-98, the Governor and General Assembly relied upon a one-time payment by Trigon Blue Cross-Blue Shield in return for letting it become a stock-holders' corporation. The money offered up by Trigon came very close to being the amount of new money appropriated to Virginia higher education. What will happen next year and the year after that?

It is easy to trace the diminishing level of support for Virginia higher education. In 1977, the system's share of the state's general fund revenue was 14.4 percent; by 1997 it has dropped to 11.7 percent.

In 1987, I reported that faculty salaries, adjusted for inflation, had increased by more than $5000 in the previous decade (unadjusted, they had more than doubled). But in the past ten years the inflation adjusted increase has slowed considerably, so our faculty have gained only about $1700.

Most telling are Virginia's standing among the states in funding per student and the extent to which the costs of higher education have been shifted to students and their families. In 1995, Virginia ranked

44th in funding per student, ahead of only Louisiana and West Virginia among the southern states. In 1987, we ranked 27th.

The responsibility for supporting the colleges and universities has been shifted to students and their families because, with less state support, there was nowhere else to go for money. Tuition has become a user-tax on people investing in the future, their own and their children's.

About 20 years ago, Virginia adopted a policy that required the colleges and universities to generate about one-third of their operating revenues for their main educational activities from tuition; the state would provide the remainder. That policy, refined as the system of higher education evolved, was in force until the recession of the early 1990s. Then, as state support was slashed over a period of three years, the colleges and universities sought and were given authority to increase tuition in order to stay afloat. The state provided major increases in student financial aid to help those who simply could not pay the higher prices. But today, slightly less than half of the operating revenues for the main educational activities come from tuition and fees.

From a financial perspective, we probably saved the colleges and universities from disaster by moving quickly to replace the lost state support. It may have been the right decision in a bad situation. But it was not good public policy, and we shall live with its consequences for some time to come. The high tuitions have fueled a widely held perception that higher education is a private rather than a public good. From a consumer standpoint, it is viewed as a service purchased at a high price, with no resulting social or ethical obligation to the recipient. No matter that half the costs of college education still are subsidized by the taxes of citizens, many of whom will never participate in higher education themselves. The notion of higher education as a public good, as one of the cohesive elements that holds society together, is largely discounted today.

Many of the new ideas for funding higher education propose to give money to students rather than to institutions. This, too, may be partly the result of high prices and the evolution of students into consumers. It also may reflect the popular mistrust of institutions in general and of public institutions in particular. The arguments for "vouchers" at the elementary and secondary school levels imply that parents either know best what kind of schooling to choose for their children or, if they do not, should bear the consequences of their own poor choices. But here again the notion of education as a private rather than a public good is implicit.

Some new higher education funding programs give money directly to students regardless of their financial circumstances and based upon average-or-better high school performance; the "HOPE Scholarships" offered by the state of Georgia are a good example. Other programs offer tax benefits, sometimes based upon need (as are the tax rebates and credits proposed by President Clinton during the 1996 campaign) and sometimes not (as is the benefit that results from buying a contract in the Virginia Prepaid Educational Program). Except for those that are based upon financial need, the programs tend mostly to benefit students and families with middle- and upper-level incomes, who are likely to have better academic preparation and grades.

Shifting money for higher education from institu-

tions to students is tempting. But I think that the people of Virginia trust their colleges and universities more than their elected representatives may assume. And shifting support away from them to students is wasteful because too much of the money may go to students whose families can and do pay the cost of attending Virginia institutions. It may channel money away from the neediest students at a time when the state's appropriation for financial aid for needy students is only about one-third of what it should be.

Giving money to students does not increase the base funding of the colleges and universities, which is insufficient. Since 1977, higher education's portion of the state's general fund budget has declined. From the academic year 1988-89 to 1997-98, state funding per student has declined by 19 percent in constant dollars. The instructional programs of the institutions have been supported increasingly by tuition and fees. Providing subsidies to individuals across the board, without regard for ability to pay, is a luxury Virginia cannot afford under present conditions.

Let's put some numbers on the table. In the academic year 1995-96, North Carolina provided $5,874 in state support for each full-time-equivalent student in its colleges and universities. Virginia provided $3,736. To match North Carolina's support, Virginia would have to increase its funding for higher education by **more than $460 million per year**!

To match Tennessee's support, which places it 25th among the states, Virginia would have to add about **$220 million per year**. To match Maryland, we'd need to add just slightly less.

Speaking to a group of Virginia business leaders last year, Mark Musick, president of the Southern Regional Education Board, said that, considering the state's low level of funding for higher education, Virginia has better colleges and universities than it deserves. He is right. We cannot maintain faculties that are substantially better than average, for example, with salaries that are substantially lower than average. In the long run, we will get what we pay for.

When Virginia decides that higher education is, in fact, critical to the state's continued economic development as well as to the ability of its citizens to lead good lives, its elected officials will see the wisdom of supporting colleges and universities at least as well as they did in 1987 (that is, about as well as Maryland does). We then should consider additional forms of tuition subsidy for all Virginians. Now, when state financial aid for low-income students is only about one-third of what is needed, and state support for colleges and universities places Virginia 44th among the states, the state should support its institutions adequately and provide financial aid for the needy among our citizens.

Leave Politics at the Door

In the early 1950s, a friend landed his first academic job at a public southern university. Midway through the first semester, he was visited by a colleague who "invited" him to contribute $5 from every paycheck to the Governor's re-election campaign. Naively, he declined. At the end of the semester, his services were no longer required.

Political interference in colleges and universities is nothing new. But it comes and goes, and now its intensity is increasing. Because higher education in America is the door to everywhere, because it is what

virtually everyone wants or needs, it is no wonder that factions want to control it. They want it to be responsive to their perceptions of what needs to be done.

Those responsible for colleges and universities have an obligation to listen respectfully, to meet changing needs as best they can, and to decline to be controlled.

It is unfortunate that we seem to have entered into another phase of overt political interference with higher education because it distracts colleges and universities from important changes they need to make. Primarily, they need to adjust what they do and how they relate to other social institutions, particularly businesses. We are deciding how to prepare the women and men who will sustain the kind of society we want to live in. Partisan political agendas, ideology, and even the political maneuvering occasioned by expansive institutional ambitions, divert attention from the truly important issues of the day.

What we need now are governing boards that exemplify the defining values we are trying to protect as higher education changes to meet the needs of an advanced-technology based economy. We want a society whose citizens are involved, enlightened, tolerant, and willing to negotiate differences of opinion. We want them to be productively engaged in satisfying work. But these two objectives now are in tension within higher education because the nature of work is changing so dramatically. Faculties across Virginia and the nation are trying to adapt curricula to give students the high levels of technical skill and knowledge they need to meet the expectations of business, while at the same trying to hold on to the defining values that characterize education in a democratic society. Of course higher education is under stress! But the new adaptations, the new syntheses, always come out of discomfort like this. An important task of the boards is to encourage this process and to model in their own behavior how conflicts among competing goods can be reconciled.

Like the citizens of Athens at its strongest, who possessed a disinterested commitment to act in the best interests of the city, we need board members who continue to rise above party, ideology, and even advancement of institutional ambitions, to do what is best for Virginia. They should support and advise the faculties and staffs as they work through the curricular reforms that are necessary. They should help institutions develop stronger partnerships of various sorts with businesses.

We need, in short, boards whose members, in the strong Virginia tradition of lay governance, mirror the defining values of an ideal citizenry: involved, enlightened, tolerant, and able to negotiate differences of opinion.

Higher education relates to government on three levels. It is related administratively, whether public or private, through laws and regulations governing various programs and funding mechanisms. In Virginia, for instance, the private institutions must comply with various rules in order for their students to receive Tuition Assistance Grants. Public institutions are subject to a plethora of laws and regulations that dictate the administrative processes they must follow, the hoops through which they must jump in getting anything done.

On a second level, colleges and universities have an independent appeal to a large, generally middle-class

constituency of supporters: alumni, financial backers, and parents, to name only three. These supporters are part of the best networks in any state, and they influence political action with their votes and their checks.

On the third and most important level, colleges and universities are grounded on the bedrock of our democracy: on the Constitution and the intellectual traditions from which it grew. They are the institutions in which ideas are placed in the crucible and subjected to the most severe tests. Some ideas fail, others die for lack of interest. Some change our lives.

Political interference can occur at each level of relationship between higher education and government. It begins, of course, at the administrative level. In one state after another, governors have seized control of the systems offices to install staff who share their political persuasion. One governor of an eastern state recently engineered the reorganization of colleges and universities into a centrally governed system so he could get the changes he wanted by making a single telephone call.

Systems boards probably are most vulnerable to political interference because they have no alumni, no prominent financial backers, and no football teams. Taking them over can help to advance some agendas or to resist change. Playing on historic American distrust of the professional and managerial classes, board members at both the system and institutional levels may attempt to micromanage, producing a huge amount of friction that inhibits administrators who actually run things from getting their work done. Complex organizations that thrive on ideas can be reduced to shuffling bureaucracies by board micromanagement. So this kind of interference is an excellent way to prevent change that is feared and unwelcome.

At the second level, higher education's popular support, rooted in its extensive networks of friends and alumni, can be eroded by diversionary attacks on colleges and universities as bloated and inefficient or as subversive of fundamental values. These attacks are often characterized by meanness associated with resistance to change, or with the certainty that some political ideology or another is absolutely right.

Some ***ideas*** *fail,*
others die for ***lack*** *of interest.*
Some ***change*** *our lives.*

But it is difficult to force a political belief system upon colleges and universities because faculty can – and will – resist and subvert changes that are forced upon them, especially if they perceive the changes not to be in the best interest of their students and their own professional commitments. This insulates colleges and universities from political pressure but makes them vulnerable to criticism: people in other walks of life become impatient with higher education because it appears to make needed changes so slowly. A corporate CEO once quipped that he had had a terrible dream in which he was assigned responsibility for a major industry but told he had to run it like a university. At the same time, the new-found corporate enthusiasm for distributed decision-making appears to bring major businesses closer to universities in their approaches to management, in theory at least.

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Observers often fail to see that colleges and universities are changing, particularly in Virginia. Only 30 years ago there was no community college system, no George Mason University, Tech had 8,000 students, and Madison was a women's college emphasizing teacher education. Since then, Virginia college and university enrollments have increased more than fourfold, and our system of higher education is regarded as one of the best in the nation. If all this had occurred in Japan, pundits would be calling it "an educational miracle in the land of the Rising Sun."

The third level of interference is in the intellectual lives of the colleges and universities: what is taught, by whom, and to whom. In most states, this interference has been absent or subtle; in a few, it has been heavy-handed. In my experience, Virginia has been free from it. But I sense, largely through anecdotal evidence at this point, that political interference is on the rise.

A university chancellor who later was elected governor of his state appeared before the legislature some years ago to answer criticisms about what the faculty was teaching.

half
is wrong.
But which half

Both our democracy and our colleges and universities are grounded together on the principles of intellectual tolerance and inquiry exemplified in this story. We have always to consider the possibility that we may be wrong. But that is the price we pay for the possibility of being right.

Political interference in higher education is a symptom of a much larger fear that things seem out of our control. We are at the end of one intellectual tradition and working toward another. We are at the end of a millennium, which induces a sense of uncertainty (and verbosity about it). And we are at the end of the Cold War, during which we knew clearly who the enemy was. Now, in a time of heightened economic competition and ubiquitous information, the world's peoples are disquietingly free of restraints. There is more opportunity but also more migration, tribal nationalism, and fundamentalist fervor. There is more emphasis upon difference.

Some people react fearfully to change and seek to impose more rigid controls on institutions and processes. In *Leadership Without Easy Answers* (Cambridge, 1994), Ronald Heifitz observes that "severe distress can make people cruel: empathy, compassion, and flexibility of mind are sacrificed to the desperate desire for order" (p. 235). As the institutions in which new ideas are tested and taught, colleges and universities are particularly apt to come under attack by those who are distressed by change.

Because it is the gateway to most things we consider to be good, higher education and our way of life are closely intertwined. This has led some public intellectuals, elected officials, and others to assert that the enemy that was without during the Cold War is now within, and that its agents promote change in the ways we think, what we think about, and how we behave. The charge that colleges and universities are subversive to established values and the principles of democracy finds fertile ground in the anti-intellectualism that historically has characterized Americans' ambivalent feelings about academic institutions. It leads to the conclusion that it is necessary to control who is allowed to teach or correct what is being taught.

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The competition for scarce state revenue provides occasions for political interference in higher education. Colleges and universities have, as I have noted, some of the best networks of friends and supporters in any state. Their clamor for additional money can be muted by attaching to the institutions, and their faculties, an alliterative list of adjectives: lazy, liberal, licentious, lax, and leftist. Discrediting the institutions and those who work in them is one of the best ways to divert attention from inadequate financial support. And those from without who would suppress the rich ferment of collegiate life have allies within the academy. Perceiving that resources are limited, some entrenched factions are trying to preserve their privileges while excluding newcomers. In higher education, this entails attacks on equal opportunity and affirmative action in some states, and the suggestion in some others that too many people are going to college. It is a "lifeboat mentality:" there are a limited number of places in the boat, so the rest have to stay in the water. And in the United States today most of the "rest" are people who are poor and not Caucasian.

Imperfect though they are, in the past 30 years colleges and universities have become the most important providers of equal opportunity in our society. They also are the most important sources of skilled workers and entrepreneurs, and of new products and technologies. And if they are true to their highest calling, they help students encounter ethical questions, whose answers will shape their lives. As a nation, we cannot afford to be unable to afford higher education for all citizens who can benefit from it.

The best defense of colleges and universities finally lies in the hands of the women and men who are appointed to govern them. Their good judgment and shared commitment to long-range educational objectives are essential.

Governing boards have different responsibilities now that the academy is closely involved with other social institutions and the body politic, rather than distant as it was until only a few decades ago. In addition to their fiduciary responsibilities, board members now should help senior administrators form essential collaborative relationships and understand the environment within which they are working. This means that they should be experienced, well connected, and able to work effectively in an unsettled environment.

Board members richer in conviction than in professional experience or maturity may threaten the freedom of inquiry that is the foundation of institutions of higher learning by attempting to impose their personal opinions upon the curriculum, the composition of the student body, or the services provided by the system and the institutions. Those who fear change and do not understand the necessity for it may impede the work of institutions or whole systems preparing for the challenges of a post industrial society.

There is no easy way to ensure that the right kinds of persons are appointed to boards. But alarm about what is happening in some states has caused the national Association of Governing Boards to advocate creation of review panels that would evaluate the credentials of possible board members and create lists of qualified candidates from which the appointing authorities can select their nominees. The idea has merit and might be considered here in Virginia.

Kentucky, Massachusetts, and Minnesota have introduced versions of it. A non-partisan review panel composed of eminent and knowledgeable citizens could help to ensure that the worst effects of political interference do not afflict this system of higher education and its member institutions.

The Chichester Commission on the Future of Higher Education (1996) suggested the "possible benefits of permitting the boards of visitors of the selected institutions to appoint a limited number of members in addition to those now appointed by the Governor" (p. 26). If this suggestion were implemented, the list of qualified candidates could be used by boards as well as by the Governor.

Short of a review commission, the Governor and General Assembly might consider creating a non-partisan commission to recommend the qualifications necessary for appointment to higher education governing or coordinating boards. This would help to guard against excessive politicization and could prepare the way for a review panel at some time in the future.

The Dangerous Opportunities of Advanced Technology

Resistance to change goes well beyond ideological conflict. What now faces higher education is reconfiguration of its most fundamental structures.

The last major adaptive challenge of American higher education was the enrollment and research explosion that followed World War II. The next challenge is posed by the potential to use advanced communications technology to deliver courses and programs. In the years ahead, we shall participate in the development of higher education as a mass retail market. The emergence of mass market providers of education is as inevitable as the westward expansion of the United States in the 19th century. The opportunities are there, and no regulators or enforcers are going to prevent their being seized. We cannot avoid being involved, so we should position ourselves to make the most of the opportunities that will be opened to us.

The New Partnerships. Here's what I think will happen. New alliances will be formed to link intellectual and credentialing resources (possibly major universities themselves) with communications and technical resources, and with capital. (Think, for instance, of an alliance of the University of California, the Disney corporation, and one of the Silicon Valley giants or gazelles.) Their objective will be to offer on-line electronic education accessible in the home or workplace at prices that are less than those routinely charged by regional colleges and universities.

The electronic providers probably will start with course offerings at the basic (or even remedial) and the professional (continuing education for in-place workers) levels. They will branch out from there, never trying to encompass the whole curriculum of the contemporary university, but picking out the courses and programs that typically have high enrollment. They will, in short, cherry-pick the curriculum, selectively competing where most of the demand occurs.

Their prices can be lower because their costs will be lower. They will not have the expenses of physical plants, student services, intercollegiate athletics, and the like. They will not be as staff-intensive as the typical university, in which faculty teach only those students who can fit into the classroom or lecture hall.

If done carefully, this will be "education for the masses" without being "mass education." The limited examples we have seen thus far indicate that a significant number of students are willing to invest in custom-designed products from consumer-friendly vendors.

The development costs of electronic courses are high, perhaps around $5 million apiece. But the potential volume of consumers is high, too, because these alliances will eschew involvement in the high-cost, low-demand parts of the curriculum that are heavily subsidized in a regular university.

This means that what may be left out is much of the traditional arts and sciences and general education. It won't matter much to the providers or, unfortunately, to their customers that Wordsworth "wander'd lonely as a cloud" or that Yeats built a small cabin at Innisfree. Neither will the study of history, forms of government, or economic theories be compelling. What will matter is knowledge and skills that can be applied immediately in the workplace.

Those who say that "general education" is valued by employers should look at a typical hiring pattern of industry among community college students. Students regularly are hired as soon as they have learned the technical skills the employer wants, and they leave college without either a degree or general education.

What might emerge is a market for technical education that leads directly and immediately to employment, followed by "on-time" and "as-needed" additional education that keeps workers as skilled and knowledgeable as they have to be. "General education" might be postponed until later in life when there is more leisure, for one thing, and more need for the consolations of the arts and letters, for another.

As for the laboratory science courses necessary to a technical education, they may be provided, at least in part, by sophisticated computer simulation techniques that make it possible to do laboratory science without actually being in a laboratory. Alternatively, students may enroll part-time in the local college or university for them, and transfer the credits to the electronic vendor. Again, the electronic vendor avoids the high cost of maintaining fixed assets.

"Are these the shadows of the things that will be, or are they the shadows of the things that may be, only?" The answer, I think, is that the advent of high-volume, electronic delivery of higher education is inevitable. But many institutions can seize the opportunities available in this new environment if they are agile, creative, and willing to change.

ELECTRONIC PROVIDERS WILL CHERRY-PICK THE CURRICULUM THEIR PRICES CAN BE LOWER BECAUSE THEIR COSTS WILL BE LOWER

Every person linked into the World Wide Web is nonetheless somewhere

Meeting Customer Demands. There are more than 14 million students enrolled in the nation's colleges and universities, and this number could increase substantially when electronic access is offered. But among the current 14 million are a group of about 5 million that now want, and probably will continue to want, the traditional "collegiate" experience. This pool could swell somewhat as the echo of the baby-boom surges through our public schools and into college or university. But the important point is that a substantial number of students probably will continue to want a campus-based, undergraduate, graduate, or professional school educational experience. Some portion of the remaining 9 million is potentially the market for electronically delivered instruction.

Virginia's share of the national enrollments is significant, for we have the 11th largest system of higher education in the United States. About 350,000 students are enrolled in our colleges and universities, and of them about 150,000 probably will continue to want a traditional college experience. These students will go to institutions that are distinctive in some way: for their reputations, location, special curricula and purposes, physical beauty, their athletic prowess, or some other extraneous factor. Many institutions already have developed their special market "niches": Harvard, Notre Dame, and the national military academies, for instance. Others will develop them: those that can't will have an opportunity to transform themselves into different kinds of colleges and universities than we know today.

As this shake-out occurs, it will be important to remember that while advanced communications technology connects us regardless of space and time (it is "asynchronous"), every person linked into the World-Wide Web is nonetheless somewhere – in some particular place – at some time. We are physical beings, and we form families, groups, and communities with other proximate human beings.

In *Democracy's Discontent* (Cambridge, 1996), Harvard government professor Michael J. Sandel wrote that:

> *The global media and markets that shape our lives beckon us to a world beyond boundaries and belonging. But the civic resources we need to master these forces ...are still to be found in the places and stories, memories and meaning, incidents and identities, that situate us in the world and give our lives their moral particularity (p. 349).*

One of the less-noted roles of many colleges and universities is to enrich the quality of life in the communities in which they are physically located. This role will become increasingly important as instruction becomes widely available over electronic networks. One service the British Open University or a national cablevision company cannot offer residents of Hampton Roads or Southside is physical presence – a place. Attractive though electronic course and program offerings may be, there is an important and rewarding role for the local college or university that is sufficiently flexible and imaginative to seize it.

I envision a time when large communications networks offer much of the instruction in higher education. They will contract with outstanding faculty from all over the nation, and even the world, to offer the instruction, and they will have computer and communications experts to help them design their presentations. The networks will confer degrees and provide "credit banks" in which students can

accumulate academic credits earned in a variety of settings, irrespective of place or time. (These "credit banks" may replace much of what we now call "accreditation." A network will bank credits only from those educational entities that meet its standards.) The Western Governors' University may be the prototype of this new kind of networked college.

The mass marketers will not serve their clients exclusively by electronic delivery systems, although electronic delivery is a distinctive characteristic of what is being developed. Another characteristic, one that is not possessed by most higher education institutions today, is rapid response time. The new marketers will discern a customer need, design and deliver a program to meet it, and close the program down when the need has been met – all with a cycle time far faster than the present curriculum development and review procedures of higher education.

Millions of students will receive advanced education using the networks: degrees, skill upgrading, avocational development – most of which colleges and universities today regard as in their domain. The 350,000 Virginia enrollments, and the 14 million national, might increase far beyond what normal population growth would dictate, simply because opportunities for advanced learning will be so much more accessible. There will be programs custom designed to fit student needs, prior experiences, and schedules.

This is not as far-fetched as it may seem at first glance. Major mass-market retailers have begun to offer custom-made shoes and clothing, using computer pattern-cutting and highly automated manufacturing processes. If Levi-Strauss can produce a custom-made pair of blue jeans at about the same cost as the ones off the shelf, there is no reason at all why entrepreneurial vendors of higher education cannot do the same thing with an MBA. Now almost all the products of state-supported higher education are "off the shelf"; these products will fare poorly in the markets that are developing.

Teaching, Learning, and Research. The agile and creative institution that lacks the distinctive market niche to serve a full complement of traditional residential students will respond to this new environment by developing new service roles. Its faculty will become expert as booking agents, navigators, and tutors.

As "booking agents," they will use their special knowledge to evaluate the array of educational programs offered by various vendors and help their institution enter into agreements to function as host (or receive) sites for the best of them. They will continue to make critical judgments, as they do now, about the content areas in which they specialize, and seek out the best electronic materials for the people served by their institutions. In addition, they will use their knowledge and professional networks to arrange visits by stimulating and provocative guest lecturers, outstanding artists and performers, and others who can enrich the quality of life in the communities surrounding them.

As "navigators," they will help students find their way through the potentially bewildering array of course and program options available to them. The World-Wide Web offers huge volumes of information that have not been scoured by professional librarians or any other authorities. In some respects this is enormously liberating; in others, it is potentially confusing and misleading. The faculty-as-navigator

will help students learn how to find their way through masses of undifferentiated information. This ability, which British Prime Minister Harold McMillan once described as "knowing when another chap is talking rot," is central to liberal education. If anything, it will be even more important in the future.

The "information age" is apt to be a great disappointment if we do not create ways to give meaning to the information at our disposal – that is, if we cannot transform information into knowledge. Perhaps, then, we should add a sub-role: faculty-as-alchemist.

What we are affirming here, in a vastly different environment, is the classic role of the tutor in English universities, a teacher-scholar who is in frequent contact with students in small groups. This kind of contact is becoming increasingly difficult today as enrollment growth and limited resources cause many faculty to work with larger numbers of students. Electronically delivered instruction can result in faculty having more time for students than they have now. As a Virginia Tech report noted in 1988, the advanced technology, if used correctly, will "free faculty for students, not from them" ("The Impact of Digital Technology Upon the Classroom Environment," Virginia Tech, 1988).

As "tutors," the faculty of the flexible and imaginative institution will offer students opportunities to augment instruction delivered electronically with personal, usually small-group, learning experiences. Tutorials will offer extra help with difficult topics, help students tailor their learning to the local conditions of their lives and work, or offer opportunities to learn in ways that may not be available electronically.

In *The Paideia Proposal*, Mortimer Adler points out that bad teaching (and poor learning) often is the result of a mis-match between what teachers are trying to teach and how they are trying to teach it (NY: McMillan, 1980). For instance, "information transfer" is simply a process of one person conveying information to others. Put most simply, the teaching method is "I talk, you listen." But, Adler suggests, we can't teach ethics that way, or the close reading of literature. We can't explore questions for which there are many possible answers ("What is beauty?" "When should we withdraw life support?"). We also can't teach laboratory procedures, diagnostic techniques and surgery, or dance. To teach these, we need three other methods: dialogue, coaching, and apprenticeship.

Instructional technology is improving so rapidly that it is possible to use all of Adler's teaching methods electronically. Indeed, in less than a generation it will be unusual for any course not to include some material that is accessed using electronic networks. Personal contact almost certainly will be possible through the mediation of electronic technology, just as it is possible today through the medium of print. The question is to what degree physical proximity – the caring presence of one with whom I break bread or sip coffee while working through some scholarly problem – will be necessary to that contact.

> *Personal exchange is a* sine qua non *of learning …friction between two minds lights the fuel that fires all education. What I think we do not yet know is what ineffable educational benefits are lost when people are not in each other's physical presence. After all, we do not assume such a loss when we are using familiar technologies such as books (Margaret A. Miller, "Technoliteracy and the New Professor," New Literary History, 1995, 26: 601-611).*

It is possible, Miller notes, to be strongly influenced by the work of John Henry Newman, "who has long been unavailable for conversation."

Nevertheless, I suspect that we shall forget at our peril the importance of some direct, face-to-face human interaction in all aspects of our lives, including education. The agile institution whose faculty members are navigators and tutors will continue to make a critical contribution to advanced education to the extent that it can be the place in which the abstract can be grounded in place and practice. I can imagine the possibility of quality discourse occurring over great distances; electronic technology merely makes immediate and interactive what the book long has provided. But I cannot imagine learning experiences that do not, in ways perhaps new to us, respect our flesh-and-blood existence and the fact that we act in the world in space and time.

Research in this new world of higher education will be carried out where it usually is carried out now: in major research institutions that will look much like they do today, except that they will be even more broadly networked to enable collaboration and resource-sharing. Most faculty at other institutions – the community colleges, the flexible and imaginative regional ones, and smaller niche-market colleges – will be responsible more explicitly for what they do now: stay current in modern scholarship so as to be able to teach the best that has been thought and said in their subject fields. Some will originate instruction for broad general transmission.

We shall need new ways to fund institutions. Many of them will be brokers for various instructional programs delivered electronically but may not confer many of the degrees their students earn. They will augment instruction offered nationally but will not generate most of the credit hours earned by their students. Indeed, in many ways the students will not be "their" students at all.

In addition, some positions now filled by faculty will be converted to different use and at different costs. There will be a need for more professional staff who are technical experts in creating, presenting, and disseminating and receiving electronically delivered instruction. These information technology specialists will provide essential support to faculty and students and they will, therefore, be central members of the staff. But exactly how they will be formally associated with the institutions, as permanent staff or as independent contractors, for example, is not clear.

It is not too soon to begin designing new funding mechanisms and personnel systems that acknowledge some of the changes that are already happening, and the Council of Higher Education should begin working with the institutions to do so.

Finally, there is the question of values: what they are, and how they will be maintained. The system I have described will be highly utilitarian, at best. I t will offer consumers what they will buy at prices they will pay. As I said earlier, general education and what we think of as the traditional liberal arts and sciences are apt to be among the first casualties. Can we maintain a set of "core values" that higher education should convey and, if so, how?

We ought not become romantic or nostalgic here. Long before there were electronic networks, higher education in America was strongly utilitarian. When its utility has been questioned, enrollments have dropped, as they did during the middle of the 19th century. Today, many, perhaps most, among the millions who participate in higher education today do not do so for love of truth and beauty. They want jobs and a secure place on the socio-economic ladder.

While there are many different opinions about what "core values" American higher education should convey, many people probably would agree that we want students to learn about their own culture and history, as well as to be introduced to the cultures and histories of others. We want them to be good writers, speakers, and readers of their own language, as well as having at least minimal competence in another language. We want them to be familiar with the concepts and tools of modern science and mathematics. Finally, and I think most important, we want them to grapple with important ethical problems, chief among which is defining what a "good life" is and how it should be lived.

Students who participate in the traditional collegiate experience will be exposed to some variation on these core values, while those who pursue advanced education electronically very well might not. This difference could lead to the development of two kinds of higher education, and the United States might back itself into a model that is more like those in numerous economically advanced nations that have "university" and "technical institute" education. But again, it is important to avoid romanticizing the current array of higher education experiences. Many of our nation's colleges and universities merely salute the general education that is supposed to convey core values; and many if not most of the 14 million students couldn't care less about them. Students learn from how their college or university behaves, as well as from their professors, and some are learning that a liberal education that helps to develop core values really is not very important. Vocationalism is not new to American higher education; it merely may become more pervasive.

For many students, college has become a variety of trade school that they attend to acquire specific technical skills and abilities. These may be adults whose liberal education prepared them to do nothing in particular. They may be immigrants or children from families of the poor seeking to grasp the first rung on the ladder of opportunity, students whose interest in truth and beauty might have to wait upon economic security. They might be students whose immaturity blocks everything but narrow and material self-interest until a broader self-interest requires them to have not only a technical skill but some measure of wisdom as well. The success of public television shows like NOVA and Ken Burns's series on the Civil War evidences the public's hunger for knowledge that goes beyond what they need to earn their daily bread.

Electronic delivery techniques can be used to offer general education of exceptionally high quality.

especially if combined with mentoring and tutoring by faculty at local institutions. Faculty at Virginia Tech and the University of Virginia have developed several outstanding courses in engineering and the arts and sciences, and their colleagues elsewhere have done the same. The IBM Corporation has produced a teaching module on Tennyson's "Ulysses" that is both intellectually and emotionally engaging. Partnerships between content specialists and information technology specialists can develop a great variety of general education courses that students will want. Indeed, the capacity to tailor-make electronic courses may offer students opportunities to become engaged in serious consideration of fundamental issues and their own values in ways that are immediately significant to their work, families, and communities.

Higher education should find ways to meet the needs of all students for the individual and civic development that we call "general education." It is already abundantly clear that this is a need that many students in higher education and many potential employers do not recognize, and this may become an even greater problem in the consumer-driven future. The colleges and universities should use their extensive resources and the vast capacities of the new technologies to offer even richer and more pertinent general education experiences.

WE NEED TO CONVINCE STATE GOVERNMENTS THAT GENERAL EDUCATION IS IMPORTANT ENOUGH TO INVEST IN, AND WE NEED TO SHOW THE ELECTRONIC PROVIDERS THAT IT IS POTENTIALLY PROFITABLE FOR THEM TO DO THE SAME.

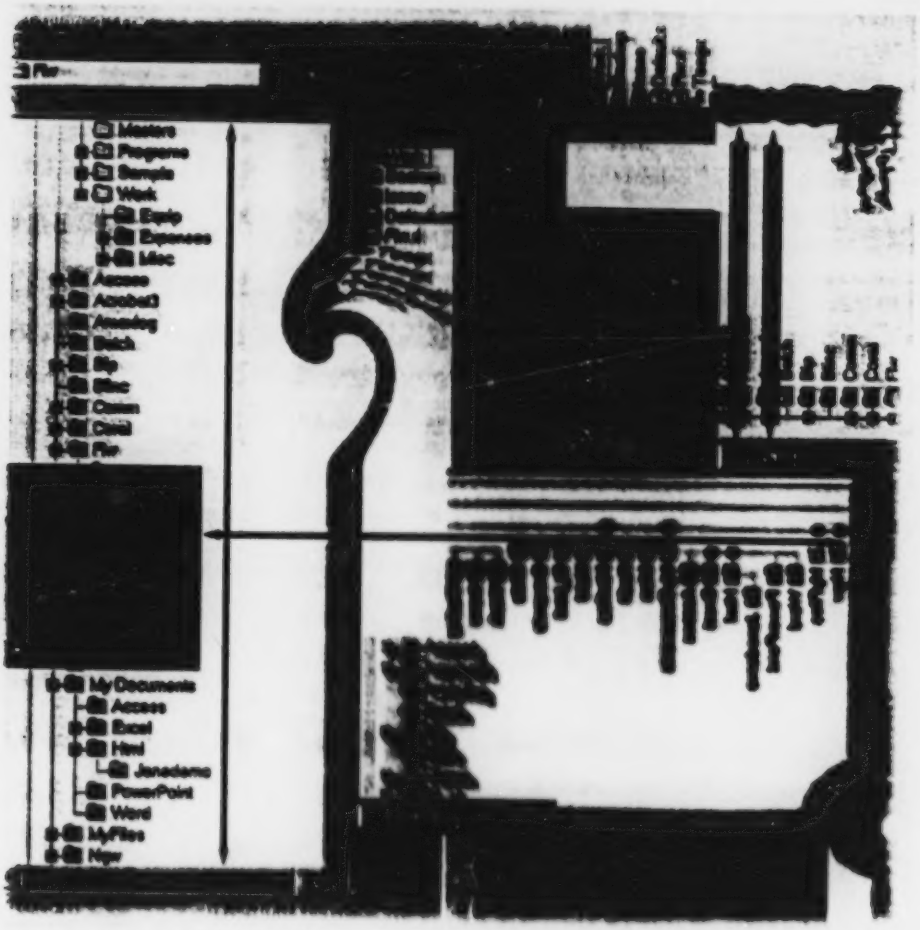

PLATE 6

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SYSTEMS WITH NEW RULES

As communications technology rearranges the competitive landscape within which Virginia's colleges and universities and others will operate, the nature of state higher education systems also will change. So will the way in which these systems are governed effectively. Reflecting on the ironies of recent advances in communications technology, Craig L. Fields, one of the developers of the Internet, said recently, "We built it to be Russian-proof, but it turned out to be regulator-proof." (*New York Times*, October 29, 1996)

The End of Cartels

Generally, systems of higher education have tended to be protectionist. While their constituent institutions have grumbled about the restraints the system imposes, they have had guaranteed markets and have seen this as an acceptable trade-off. The systems have been, essentially, cartels. Thus, the basic way of organizing a system of colleges and universities used to be to divide a state into regions and assign each member institution an equitable piece of the action (student enrollment, industry contacts, and so on). Some systems of higher education have attempted to encourage cooperation between the state-supported and independent sectors. Virginia is one of these. But whether for publics only, or for publics and privates, systems have divided the business among their constituent members.

All of this changes with the entry into the market of large-scale, national providers of educational courses and programs. The technology they will use respects none of the protective devices that have characterized higher education systems in this nation or, indeed, in any nation in the world. In the opinion of some, for instance, the universities of the Netherlands do not offer an adequate array of graduate programs for a population in which almost one-fourth of adults hold baccalaureate degrees. But this does not stop graduate study; many Dutch students now get their degrees electronically from British universities. It has become very easy to break the backs of cartels.

The systems that will adapt best to the new landscape are those whose boundaries are reasonably permeable and whose conception of a mission is to perform certain kinds of work rather than to preserve certain kinds of institutions. They will be systems that build alliances rather than defenses. A "Maginot response" will be foreign to them. Their member institutions will be responsible for their own well-being in the marketplace, and they will have enough autonomy to assume that responsibility. They will not be bound by procedures and regulations that force them to do things in slow and ponderous ways. But they also will not be protected by the system. The new landscape will belong to the agile.

THE NEW LANDSCAPE WILL [illegible]NG TO THE [illegible]

The future identities of most colleges and universities are not going to be expressed in brick and concrete, and success will not be signaled by increasing the numbers of physical sites they own or control. They will need sites they occupy for a while before moving on, without permanence. To behave otherwise is to be like the Pony Express, seeking faster horses and better riders even as the telegraph wires are being strung overhead.

It is not surprising that the introduction of electronic delivery has motivated almost every college

WE NEED TO DECENTRALIZE OPERATIONAL RESPONSIBILITY TO THE COLLEGES AND UNIVERSITIES THEMSELVES

and university to think of itself as an originator of instruction and few to think of themselves as receivers. But the market will not support this understanding of what is going to happen. This technology has the potential to improve learning and, within a generation, almost every course in every college or university will include resources that are accessed electronically. Every institution will be a "receive site," and within the faculties of numerous institutions there will be teachers whose knowledge and skill offer them opportunities to originate courses and programs.

Can systems of higher education be managed in this new world? Now that turf-allocation and protectionism are obsolete, is there any role for a State Council of Higher Education? Yes, if new management techniques are developed. The Council of Higher Education and Virginia's colleges and universities are well positioned to redefine the work of state higher education systems over the next several years. Indeed, we began this work almost ten years ago and it continues today in the initiatives called "restructuring" and "decentralization."

All institutions, especially successful ones, are apt to become complacent over time. The new coordinating body is in the business of disturbing complacency effectively, and of engendering a sense of restlessness and healthy dissatisfaction within the system of higher education and among those responsible for it.

At the end of every higher education success story, the Council's voice should be heard murmuring, "Yes, but...." At the end of every project, it should wonder aloud, "What would happen if ...?" or "Wouldn't it be interesting to...?"

I do not think any central administration will be able to develop strategies that are responsive to the changes that occur in the complex environments that now exist. We have to learn management techniques that do not attempt to force-feed all information through a central mechanism, because such mechanisms can't react quickly or creatively. Authority and responsibility need to be dispersed throughout the system.

The Council's new management techniques rely upon decentralization and institutional autonomy; insistence upon results; high tolerance for competition, confusion, and failure; and strategic investment. The new higher education coordinating body is a gadfly rather than a planner, an investor rather than an allocator, a mediator and referee rather than a regulator.

These techniques are grounded in informal authority, as opposed to the formal authority of statute and regulation. The Council's formal authority is neither extensive nor very interesting, and does not distinguish it from other coordinating bodies in American higher education. What does distinguish it are its management techniques, which depend entirely upon the tacit support of both the colleges and universities and state government.

I venture that this is a management model with which most of us are not familiar. It may be taught in management theory courses but most organizations – and higher education systems – still are based more on statutory and regulatory authority than on the kind of informal authority that characterizes Virginia's system. It is extremely important to Virginia higher education that creation of this new model be allowed to continue.

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It is no accident that Virginia's system of higher education is generally regarded as one of the best in the nation despite modest (and, many would agree, insufficient) state support. We have a better system than its state funding should yield, in part because we charge higher tuition and fees than in other states. But also, perhaps, it is because we have figured out a productive method of governance.

Some states may have to adapt significantly to cope with the new climate. Virginia higher education can flourish by building upon the characteristics I have identified.

We need to decentralize the greatest possible operational responsibility to the colleges and universities themselves. They have to be lean and efficient, and able to move quickly. Following the example of the autonomy given to the teaching hospitals of Virginia Commonwealth University and the University of Virginia during the 1996 Session of the General Assembly, we should give colleges and universities complete responsibility for their personnel and their operating and capital expenditures. Those that are too small to assume all of these responsibilities themselves either should form cooperatives or purchase the administrative services from larger universities.

Accountability for results should be expected, and achievement should be rewarded by budget action.

The state has taken the first steps toward developing "performance benchmarks and standards" for all activities of government. But the benchmarks that have been developed for higher education need major refinement. They measure what is easy to measure: room use, graduation rates, expenditure patterns, and so on. They avoid measuring what is difficult: whether learning occurs and, if so, how much.

We have talked long enough about ways to assess what students learn as opposed to simply how many credit hours they earn. "Learning productivity" is a measure of how much learning is occurring at what cost. We have begun to make these measurements through the Council of Higher Education's "Indicators Project," but we still have a long way to go. We need to develop performance standards that accurately and comprehensively reflect the kind of work colleges and universities actually do.

The Importance of Strategic Investment

It is rarely noted that Virginia has a history of wise strategic investments in higher education: funding that is targeted toward particular opportunities rather than spread around according to formulas. There is a national trend in this direction, as states seek the best possible returns of their higher education investments.

There are numerous examples of strategic investment in our colleges and universities over the past decade:

MAINTENANCE RESERVE. *Targeted toward preventive maintenance, the maintenance reserve fund is one reason why Virginia's physical plants are generally in good repair. Since its inception, the fund has provided $188 million to the institutions. The amount is inadequate but nonetheless very helpful.*

EQUIPMENT TRUST FUND. *Among the many that began around the time of federal tax reform in 1986, this may be the only debt-based equipment leasing program that still flourishes in American*

higher education. Over a decade, $295 million has been made available for instructional and research technology and equipment.

COLLEGE OF INTEGRATED SCIENCES AND TECHNOLOGY. *JMU's new college is one of the most exciting curriculum ventures in American higher education. The lessons learned at this new college could pave the way for curriculum reform that yields the skilled professional of tomorrow: liberally educated and scientifically and technologically literate.*

TELETECHNET. *ODU's electronic delivery network is providing services using methods that are changing American higher education. The Virginia colleges and universities that are paying attention will be better prepared when high-volume electronic delivery networks begin to operate nationally and, of course, here. The state needs to monitor the progress of TELETECHNET, and especially whether it is successful in lowering the costs of instruction, so we can determine how to invest in the future.*

THE VIRTUAL LIBRARY. *VIVA, as it is called, enables us to enter into statewide contracts for electronic databases that can be installed at one university and made available to students throughout the state by means of an electronic network that links the colleges and universities. Databases that would have cost $12.5 million if bought by individual institutions have been purchased for statewide use at one-third that cost. Private institutions recently have received foundation funding to participate.*

When the state invests strategically in some institutions but not in others, it creates tension within the system of higher education. This tension can be channeled into productive competition among the institutions, with each working to produce better ideas. It also could be channeled into partnerships among institutions and between them and business. This approach is far preferable to the competition that is inevitable otherwise: the raw political struggle among institutions for buildings and projects. Political competition, while inevitable to some extent, guarantees nothing except that money will be spent. Strategic investment, on the other hand, is a large part of what has made Virginia higher education distinctive in the nation.

We should continue this strategy, but in the future we should invest in collaborative efforts among institutions and between higher education and other social institutions. I sense that elected public officials are tired of hearing institutions argue against one another for adequate funding. That may be why the so-called "unified amendment" that contained all the institutions' needs in one package was well received in 1996.

Future strategic investment is more likely to pay off when it supports collaborations like the Microelectronics Consortium, which combines the capacities of six senior institutions and several community colleges to meet the employment needs of a growing new industry in Virginia. Another collaborative effort with good potential is the Graduate Physics Consortium, which has been formed to support the world-class high energy and laser research facilities of the Jefferson Laboratories. Institutions that can work effectively beyond their own boundaries will flourish in the years to come.

The Practical Limits of Planning

Robert Heterick, the president of EDUCOM, has observed that planning usually is based on the projection of trends into the future. "We think the future will be like the past," he said, "because in the

AND FIXED LINES OF DEFENSE WILL NOT DO

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The Council can stimulate ***Imaginations*** *and provoke* ***Consideration***

inventory replacement schedules are useful, provided they are never carved in stone. So are plans for programs like restructuring, which is a dynamic process in which the Council and the institutions work together to respond to changing circumstances and new opportunities.

One of the most important services the Council can provide is to stimulate imaginations and provoke consideration of where higher education should be going. Often it does this by helping the Governor and the General Assembly express their general intentions about higher education, as when it provided leadership and staff support for the Commission on the University of the 21st Century (1988-89) and the Commission on the Future of Higher Education (1995-96). Sometimes it proposes new funding mechanisms, like the Deferred Maintenance and the Equipment Trust funds. Sometimes it works with the institutions to devise new initiatives that respond to the current environment, like restructuring and post-tenure faculty review. Each college and university then shapes its own response within the general framework that has been established. The system has rarely been managed, or micromanaged, through legislative or executive action.

This report is not a plan. But if I were to set planning objectives for Virginia higher education over the next several years, I would list six.

1. Gain adequate funding from the state, primarily for strategic investments
2. Re-establish a coherent tuition and fee policy
3. Create a reliable source of capital outlay funding, being mindful of the coming market changes in higher education
4. Develop, use, and assess electronically delivered instruction
5. Expand the major universities' capacity for research and scholarship
6. Increase the technological and other workplace skills and knowledge of graduates

If these objectives were met, the colleges and universities would be able to provide increased access to high quality education for all Virginians, and would be better equipped to serve the needs of business and other institutions.

"We tend to approach the future from the point of view of predicting and forecasting," said Wallace Stettinius, retired chairman of Cadmus Communications. "Most of us have found that this is pretty futile.... Planning is about the future of present decisions. Your future is the accumulation of ... your present decisions" (*Virginia Business*, December 1996). Virginia higher education cannot afford to get caught in the assumption that its future will be a linear extension of its past. Because it won't, and one role of the Council of Higher Education is to remind itself and others of that.

The Significance of Alternative Advocates

A sign that the official higher education structure is not working satisfactorily is the emergence of alternative organizations to advocate on behalf of higher education. These have been created in some states during the past few years, usually with support from business and industry, and occasionally from foundations. These organizations have become the "idea outlets" of higher education in their states, because the colleges and universities will use whatever means they can find to describe both the opportunities they see and their need for adequate funding. Typically, the alternative organizations try to establish communication with elected public officals and others by circumventing bureaucratic processes that would inhibit it.

The Virginia Business-Higher Education Council is a leading national example of these alternative organizations. It came into being at the request of the college and university presidents, who perceived that the system's coordinating council had surrendered its informal authority and its effectiveness as an advocate for higher education in Virginia. Drawing upon existing resources within the system, the VBHEC has used its credibility to mount successful drives for increased funding in the last three sessions of the General Assembly.

But the Business-Higher Education Council has turned out to be more than the symptom of a malaise. It is most significant because it represents the kinds of work colleges and universities should now undertake, which involves their reaching out to form relationships with new partners.

Ten years ago, I suggested to the faculties that they lower the barriers within the academy, in particular between the disciplines. I argued then that much creative intellectual work is done by linking the disciplines to one another, particularly in the sciences, and that our students would be well-served in the future by learning that was not narrowly compartmentalized. My suggestion was repeated shortly thereafter by the Commission on the University of the 21st Century. That process has begun throughout American higher education and now appears to be working itself out within the curriculum and in scholarship. It is time to take the next step.

We need now to make more permeable the boundaries between higher education institutions themselves and between them and other institutions of our society. We need alliances; we need the strengths of synergy. The Business-Higher Education Council represents a new kind of relationship between the business sector and colleges and universities. It has challenged the institutions to explain their financial needs in terms of the services they provide, rather than simply in reference to what they want or other institutions have. Its insistence that restructuring is the *quid pro quo* for business advocacy has helped to bring about basic changes in how institutions operate. The conversations that now occur between business and higher education are about partnerships and mutual goals. We have moved past the stage in which colleges and universities saw business simply as a source of financial contributions, and businesses saw higher education simply as a source of employees. We now are talking about collaboration in a society in which work and learning are inextricably related.

The new relationships are not yet firmly established, and it is fair to say that representatives of both business and higher education are still creating the protocols and paradigms. It is not clear that business always knows just what it wants from higher education, or vice versa. And colleges and universities have yet to meet the challenge to justify their financial needs in terms of what it takes to provide the services expected from them. In addition, there is great diversity on both sides of the table, which means that expectations and capacities to respond will differ depending upon the relationship.

But the right conversation is occurring, and the right people are in the room. Thus far, there appears to be a high level of mutual respect among the participants. The business representatives recognize that colleges and universities cannot simply be at their beck and call. College and university presidents, for their part, are genuinely listening to what an influential constituency has to say. The new relationship can lead to people, resources, and ideas flowing back and forth through the boundaries of all the organizations involved.

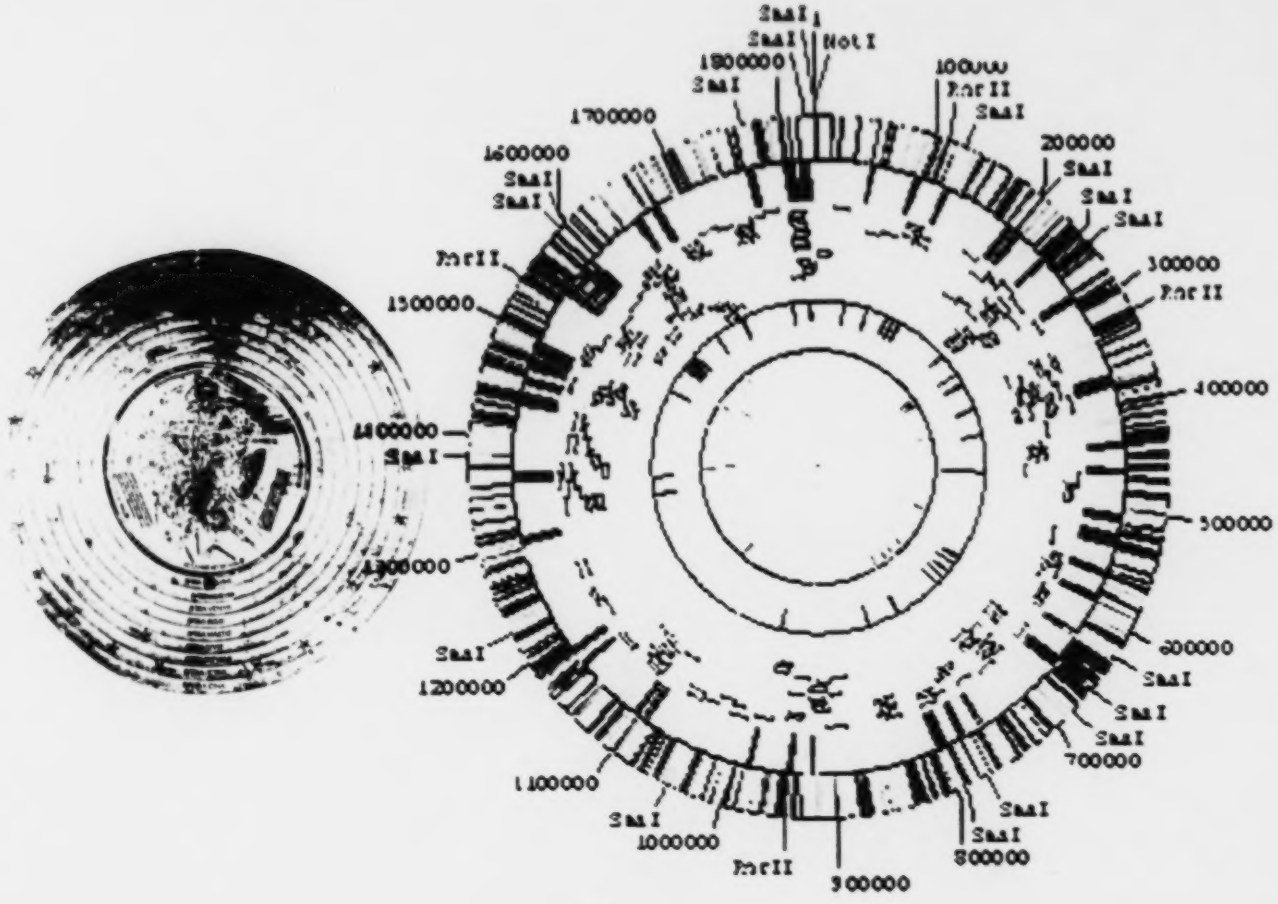

PLATE 7

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In discussing the three areas in which we need to act in order to ensure that our colleges and universities serve Virginia even better 20 years from now than they do today, I have offered a few specific suggestions that might be useful to those who recognize the importance of higher education and will join with us to carry on this work. I also have described how a non-regulatory system can operate and have suggested that the Virginia system is well positioned to adapt to future developments in higher education. In this concluding section of my report, I summarize these suggestions and add a few more.

I offer these suggestions hoping that they will prompt discussion. There are no simple answers and no patent medicines to keep us healthy. The key to effective leadership in our society is not having all the answers; it is helping groups and individuals work together to devise the best solutions they can to their common problems. What follows, then, are not solutions. They are provocations.

Fund Higher Education Adequately

Two things are obvious: the system of higher education needs more money, and we need to avoid wasting the money we have.

My proposition is simple: give the colleges and universities funding at the national median and we will give Virginians the best system of higher education in the nation. The cost is high: an annual appropriations increase of about $220 million. But it can be done, if there is a will to do it.

Money cannot ensure quality, but quality costs money. Two rough tests of the adequacy of Virginia's support for higher education are to compare that support against our own ability to pay and against the support provided by other states to their colleges and universities. The results are clear: we have the 14th highest per capita income in the nation and the 44th worst state funding for higher education. If it has the will to do so, there is no reason why Virginia cannot provide funding for its colleges and universities at least at the national median of the states.

But colleges and universities should not get more money simply because they want it, or just to keep up with the Joneses. Funding at the national median should be a state commitment for those institutions whose students progress to their degrees in satisfactory numbers and at satisfactory rates while demonstrating acceptable levels of competence. Each institution's standards should be different, perhaps based on comparisons to benchmark institutions throughout the nation. But every institution should have explicit, public standards and be able to demonstrate that its students meet them. The Council and the institutions already are cooperating to survey graduates' satisfaction with their educations and employers' satisfaction with the graduates. These indicators and others should be useful in deciding upon strategic investments in the colleges and universities.

Our best defense against low-quality educational programs, whether offered electronically or by non-Virginia institutions operating here, will be solid evidence that ours are better. Balancing price and convenience against some programs of unknown or dubious quality that may be offered by Virginia institutions, I suspect that many students now judge the programs of some non-state institutions to be good enough. That is why a "shadow university" equivalent

in size to James Madison already exists in Virginia, composed of students enrolled in the various institutions from outside the state that offer courses and programs here. As competition intensifies because of electronic delivery, we need better evidence that our programs are good investments.

We need more general fund support for Virginia's colleges and universities. But we also need a rational policy about tuition and fee revenue. Most of the discussion about tuition in Virginia seems to be premised on the assumption that it suddenly became very high in the early part of the 1990s. This is simply not true. Virginia has been a high-tuition state for at least two decades. We simply got too high as a result of the recession several years ago. While a two-year moratorium on tuition increases was a good idea to help bring the price of education back in line with the per capita income of Virginians, our pricing decisions in the future should reflect individual institutional circumstances, the state's economic condition, and the national rate of inflation.

Virginia has provided broad access to higher education for more than three decades while at the same time pricing that education at levels that are high but nonetheless appear to have been affordable until the recession of the early 1990s. Its sizeable program of need-based student financial aid has supplemented federal financial aid programs to ensure access for needy students. That access will be jeopardized by need-blind tuition discounts or tax credits. Virginia cannot afford to give money to students who don't need it.

The capital needs of Virginia higher education also have to be met, and there should be a stream of predictable funds with which to do so. Given the self-imposed limitations on Virginia's debt capacity, the best way to create a predictable revenue source is to re-dedicate lottery revenues to capital outlay.

The lottery revenues were not originally intended to be part of Virginia's general operating revenues. Moving them back to capital outlay would be difficult but, again, could be done. If, as a result, Virginia needs additional tax revenue to provide its citizens with the services they need and want, responsible elected public officials will make that case to the people.

I do not think Virginia higher education wastes much money, but I do think it wastes some. Most notably, institutions are building too many remote sites with brick and mortar while electronic networks are being developed that will make them irrelevant. Some new campuses and centers may be needed, but many are desperate attempts to stimulate economic growth, or simply marketing mistakes. Many will be obsolescent before they leave the architect's drawing board.

Leave Politics at the Door

The governance of Virginia's colleges and universities requires steady commitment to objectives over long periods of time. Most important objectives take years to achieve, and building strong colleges and universities always takes time. Unfortunately, institutions are easier to damage than to build.

In 1996, the Governor and General Assembly reached agreement that economic development should be insulated from politics and that the state needed a long-range strategy and the staying power to make it happen. When the direction changes with each admin-

istration, little or nothing gets done. As a result, the 1996 General Assembly enacted legislation creating the Virginia Economic Development Partnership, a quasi-independent state entity whose objectives will transcend particular administrations.

If economic development is too important to subject to the vagaries of politics, so is higher education. The decentralization strongly endorsed by the Chichester Commission on the Future of Higher Education should be carried out expeditiously, and Virginia's colleges and universities should be given autonomy and responsibility for their actions.

Recognizing that institutional governing boards will play a different role as colleges and universities increase their collaborations with one another and with other social institutions, Virginia should follow several other states (Kentucky, Massachusetts, Minnesota) in creating a non-partisan citizen's commission to review the credentials of potential board members. The commission would create a list of qualified persons from which the appointing authorities could select nominees to board vacancies. The Chichester Commission suggested that boards themselves might select some of their members. If the legal status of the boards were changed, the General Assembly might wish to participate in appointing board members.

Short of a review commission, the Governor and General Assembly might consider the creation of a non-partisan commission to recommend the qualifications necessary for appointment to higher education governing or coordinating boards. This would help to guard against excessive politicization and could prepare the way for a review panel at some time in the future.

Seize the Dangerous Opportunities

Virginia can do three things to position its colleges and universities for a tumultuous future in which higher education becomes a retail commodity: invest strategically in our strengths, give the institutions more autonomy, and require precise accountability for results.

Some institutions have or will develop market niches that enable them to continue serving largely residential student populations with their own courses and programs. Others will become primarily sophisticated sites for the reception of electronic instruction, mentoring and tutoring students, and enriching the intellectual and cultural lives of the communities they serve.

INVEST STRATEGICALLY IN OUR STRENGTHS
GIVE THE INSTITUTIONS MORE AUTONOMY AND
REQUIRE PRECISE ACCOUNTABILITY FOR RESULTS

Virginia should continue to invest strategically in the good ideas advanced by its colleges and universities in order to take advantage of the opportunities that will be available in this new world of higher education. While some basic level of funding for each institution probably is necessary, it is important to recognize that not all institutions will develop strong market niches, that only a very few will originate large volumes of electronically delivered instruction, and that some will have more good ideas than others. But spreading scarce resources across all institutions without regard for the quality of their adaptation to

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new challenges is a luxury we can no longer afford. It is necessary now to invest in the good ideas of Virginia higher education.

Along with strategic investment, the Governor and General Assembly should give the colleges and universities both more autonomy and greater responsibility for their own actions. As the Chichester Commission said, there is a link between accountability and autonomy.

We believe that the faculty, administrators, and staff of the institutions will assume greater responsibility for the results they produce when they are given greater responsibility for their operations. This is true not only of institutions of higher education, but of any organization. If the state intrudes, oversees, or overrules, college and university employees will regard their obligations to the public as diminished because they are not in control (p. 25). We should maintain a relationship between the Commonwealth and the colleges and universities – they are a Virginia asset and they should remain so. But those who are responsible for them, including faculty, administrators, and governing boards, should be aware that they flourish or fail on the basis of their own initiative, imagination, and hard work.

A leading theorist in learning and technology has observed:

> *We can fight boundary-spanning satellite instruction, and try to establish signal-jamming Maginot Line policies which prevent other institutions from getting a foothold nearby – for a while. We can ignore the chorus of malcontents who trash higher education and who propose technological box-top solutions to complex problems – a bit longer. If we follow that strategy, public higher education will begin to be seen like a rock in a river. Events will flow around us, wearing us down in the process. Campuses will become smaller, poorer, and more marginal to the social mainstream (Robert M. Threlkeld, quoted in* Multiversity, the IBM magazine for colleges and universities, *Winter 1996).*

A better approach is to embrace the future and control it before it controls us. We resist change and die, accept it and survive, or lead it and flourish.

We can create better learning and provide better service. We can demonstrate the superiority of our programs in a marketplace filled with mass retailers. We can make technology the tool that gives faculty more time for students, not less. Like the makers of blue jeans and shoes, we can provide a custom-tailored product for each student. We can do it better if we take the initiative and begin to do it now.

In doing so, we can shift the focus of higher education once again, so that it becomes more appropriate to speak, as we have spoken for years, of students and teachers in learning communities, rather than of consumers and vendors in shopping malls. Seizing the dangerous opportunities is the best way to help future students learn to earn good livings and live good lives.

American systems of higher education are complex, even chaotic. Students progress through them in a variety of ways that surprise even those of us who are supposed to be responsible for them. Our systems combine, and seek to hold in productive tension, the right of individual women and men to shape their own learning and the responsibility of government to use its revenues as efficiently and effectively as possible. There are no simple formulae for doing this, only

creative adaptations to unanticipated change. The systems of higher education are as distinctively American as jazz. And like jazz, our systems of higher education thrive on improvisation.

I think the systems were simpler in 1955, when I began college. I know they were simpler in 1977, when I became Director of the State Council of Higher Education. But ideas still matter, and the need for lifelong learning is greater than it ever has been. We can be grateful that Viriginia's colleges and universities remain dedicated to creating knowledge and transmitting it for the common good.

These institutions require constant attention if they are to remain dynamic. Because the future is the accumulation of our present decisions, Virginia now needs leadership that will help colleges and universities be strong and vibrant partners in developing the Commonwealth. What we create today will determine how our children and grandchildren live tomorrow.

PLATE 8

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The poems quoted in the introduction to this report are "Monticello" by Robert Hass (*Praise*, 1979) and "Twenty-one Love Poems – XIII" by Adrienne Rich (*Dream of a Common Language*, 1978). The "distinguished teacher" to whom I refer at the end of the introduction is Wayne Booth, long-time professor at the University of Chicago.

The generous support of a group of friends, many of them former members of the Council of Higher Education, has made it possible to design, print, and distribute this report without cost to the taxpayers of Virginia. I am grateful to them for making the report broadly available. I am responsible for what it says.

Design: Michael Beck, Charlottesville, VA. Printed in the USA by Charlottesville Press.

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